

IN THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

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1. (Currently Amended) A method for controlling a point-to-multipoint transmission of a message in a mobile communication system, in which the method comprising
receiving the message ~~is received~~ (200, 300),
storing the message ~~is stored~~ in a buffer of the messages to be transmitted (201, 301),
scheduling the message ~~is scheduled~~ (302), and
transmitting the message located in the buffer ~~is transmitted~~ according to the predetermined scheduling (205, 305),
~~characterized by~~
determining a life time for the message, and
deleting the message from the buffer (210, 316) in response to the expiry of the life time.
 2. (Currently Amended) A method as claimed in claim 1, ~~characterized by~~
comprising:
checking before transmitting the message, whether there is life time left (204), and
if there is, transmitting the message,
if there is not, deleting the message from the buffer.
 3. (Currently Amended) A method as claimed in claim 2, ~~characterized by~~
comprising:
determining an acknowledgement time for the message to be transmitted as a group call,
transmitting the message to the group members (205),
waiting for the acknowledgements of the group members during the acknowledgement time (207),
checking after the expiry of the acknowledgement time, whether a predetermined part of the group members has acknowledged the message (208), and

if it has, deleting the message from the buffer-(210),
if it has not, transmitting the message located in the buffer to the group members from whom an acknowledgement has not been received.

4. (Currently Amended) A method as claimed in claim 1, ~~characterized by~~
comprising:

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receiving the message to be transmitted from another network element-(200),
making a report on the successful transmission of the message (211)-in response to deleting the message from the buffer, and
transmitting the report to said another network element-(212).

5. (Currently Amended) A method as claimed in claim 1, ~~characterized by~~
comprising:

receiving the message to be transmitted as a group call in the first network element (300),

storing the message in the buffer of the first network element-(301),

transmitting the message to the second network element-(305),

transmitting the message from the second network element to the group members (205),

waiting for the acknowledgements of the group members in the second network element during the acknowledgement time-(207) after the transmission,

making a report on the acknowledgements in the second network element (211)-after the expiry of the acknowledgement time, and

transmitting the report (212)-to the first network element.

6. (Currently Amended) A method as claimed in claim 5, ~~characterized by~~
comprising:

storing the message also in the buffer of the second network element-(201),

deleting the message also from the buffer of the second network element (210)-in response to the expiry of the life time of the message,

checking in the second network element after the expiry of the acknowledgement time, whether a predetermined part of the group members has acknowledged the message (208), and

if it has, making a report (211) on the acknowledgements and deleting the message from the buffer of the second network element (210),

if it has not, transmitting the message located in the buffer to the mobile stations from whom an acknowledgement has not been received.

7. (Currently Amended) A method as claimed in claim 6, ~~characterized by~~ comprising:

determining the maximum number of transmissions for the message in the second network element,

calculating the number of the realized transmissions (206),

checking before transmitting the message, whether the number of the realized transmissions is the same as the maximum number (209), and

if it is, making a report on the acknowledgements and deleting the message from the buffer of the second network element,

if it is not, transmitting the message located in the buffer.

8. (Currently Amended) A method as claimed in claim 6, ~~characterized by~~ comprising giving a report on the acknowledgements, if the message has been deleted from the buffer of the second network element before transmitting.

9. (Currently Amended) A method as claimed in claim 5, ~~characterized by~~ comprising the report including the group members who acknowledged the message as received.

10. (Currently Amended) A method as claimed in claim 9, ~~characterized by~~ comprising the first network element being arranged to transmit the message to the group members who did not acknowledge the group message, if these group members become reachable before the life time of the message expires.

11. (Currently Amended) A mobile communication system comprising at least one service centre (PTM-SC) to transmit a message as a point-to-multipoint transmission and at least one network element (SGSN) via which the message is transmitted to cells belonging to a destination area, ~~characterized in that~~

wherein the service centre (~~PTM-SC~~) is arranged to determine the remaining life time of the message and to check before transmitting the message, whether there is life time left and to transmit the message only if there is still life time left.

12. (Currently Amended) A mobile communication system as claimed in claim 11, ~~characterized in that~~ wherein the network element (~~SGSN~~) is arranged to determine the remaining life time of the message and to check before transmitting the message, whether there is life time left and to transmit the message only if there is still life time left.

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13. (Currently Amended) A mobile communication system as claimed in claim 11, ~~characterized in that~~ wherein the network element (~~SGSN~~) is arranged to receive acknowledgements from the group members during a certain acknowledgement time and to transmit the information on the acknowledgments in one message to the service centre.

14. (Currently Amended) A network element (~~SGSN, PTM-SC~~) of a mobile communication network which network supports the point-to-multipoint transmission of a message,

~~characterized in that~~ wherein the network element comprises
means for determining the remaining life time of a message to be transmitted point-to-multipoint, and

means for transmitting said message according to the scheduling of the message if there is still time left.

15. (Currently Amended) A network element as claimed in claim 14, ~~characterized in that~~ wherein it (~~SGSN, PTM-SC~~) also comprises

means for determining the acknowledgement time for the message to be transmitted as a multipoint group call which as to be acknowledged,

means for monitoring the acknowledgement until the acknowledgement time has expired, and

means for compiling the acknowledgements as one acknowledgement report.

16. (Currently Amended) A network element as claimed in claim 14, ~~characterized in that~~ wherein it (~~SGSN, PTM-SC~~) comprises means for transmitting the

message to be transmitted as a multipoint group call which has to be acknowledged during the life time of the message to the group members who are reachable in the destination area of the message and who have not acknowledged the message as received.

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17. (Currently Amended) A network element as claimed in claim 14,
~~characterized in that~~ wherein it (SGSN, PTM-SC) comprises a processor which is arranged to
carry out software routines and that said means are implemented as software routines.
